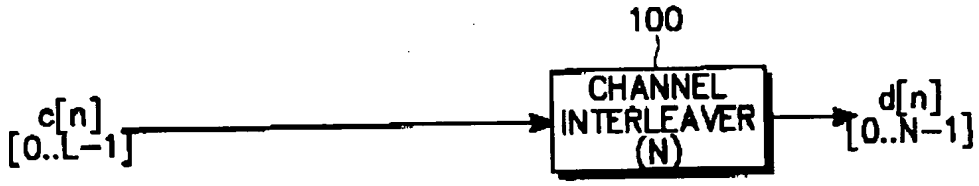


FIG. 1

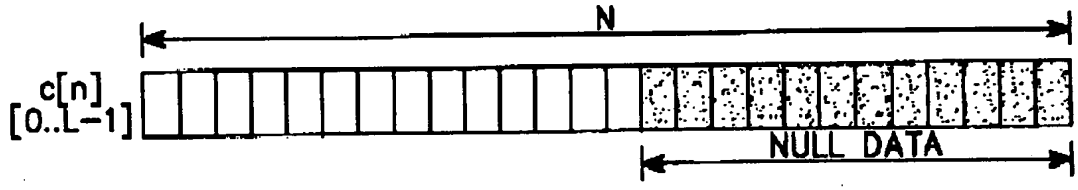


FIG. 2

FIG. 3

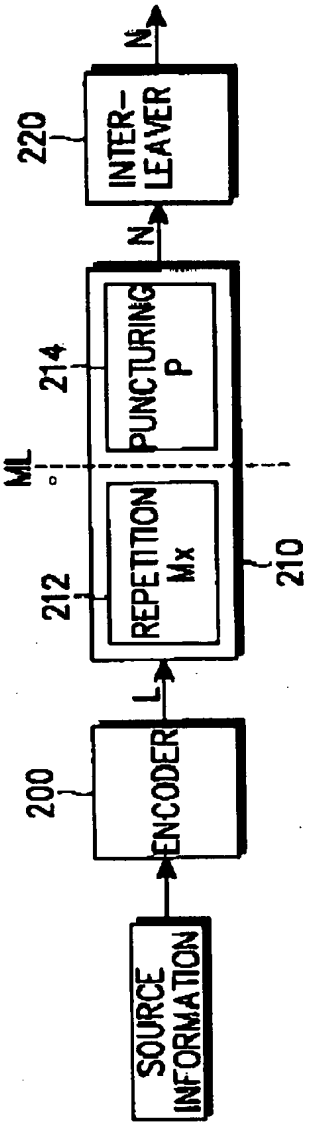
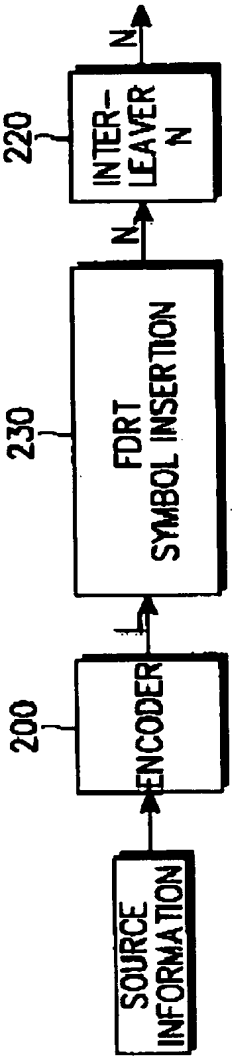

SOURCE INFORMATION
200
ENCODER
L
212
REPETITION Mx
ML
214
PUNCTURING P
210
N
220
INTER-LEAVER
N

FIG. 4


SOURCE INFORMATION
200
ENCODER
L
230
FDRT SYMBOL INSERTION
N
220
INTER-LEAVER N
N

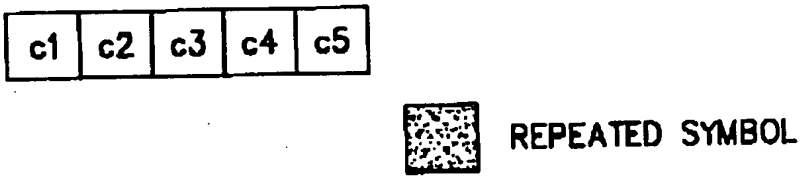


FIG. 5A

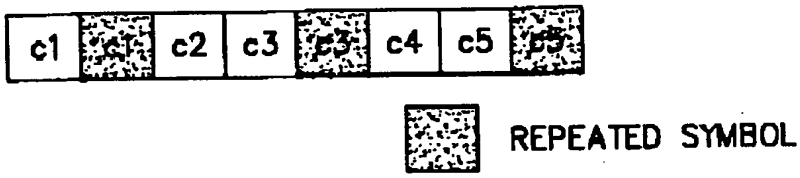


FIG. 5B

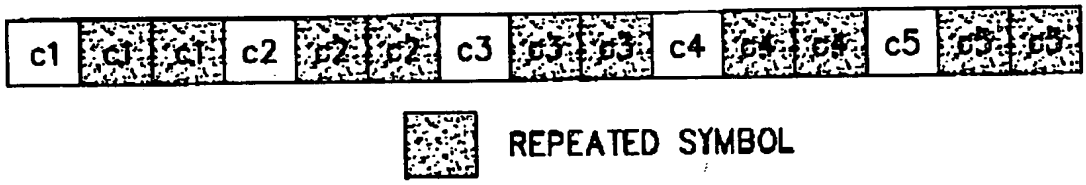


FIG. 5C

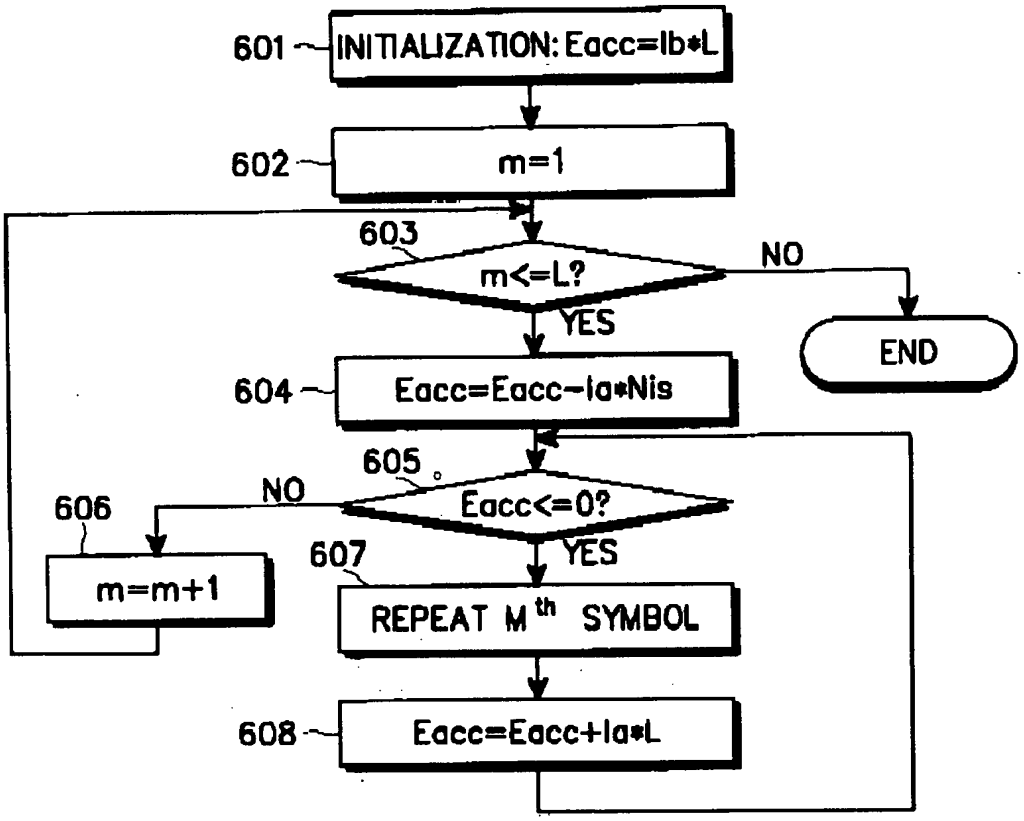

601
INITIALIZATION: Eacc=Ib*L
602
m=1
603
m<=L?
NO
YES
END
604
Eacc=Eacc-Ia*Nis
605
Eacc<=0?
NO
YES
606
m=m+1
607
REPEAT M th SYMBOL
608
Eacc=Eacc+Ia*L

FIG. 6

FIG. 7

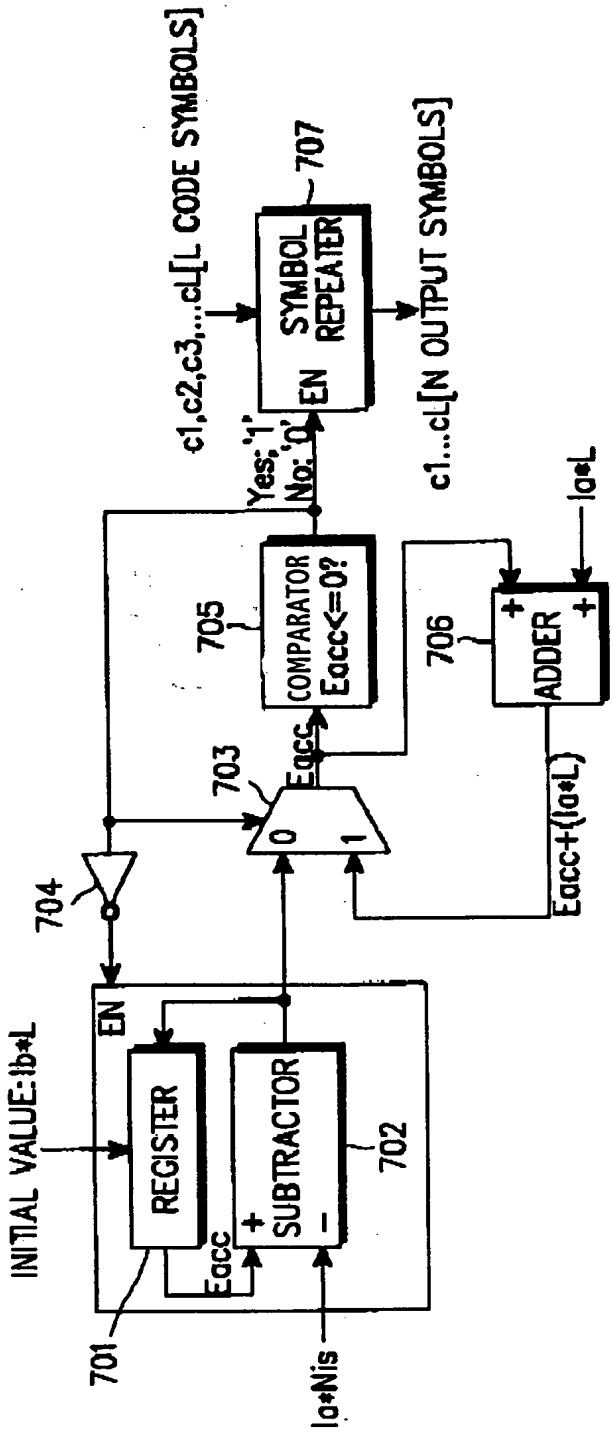
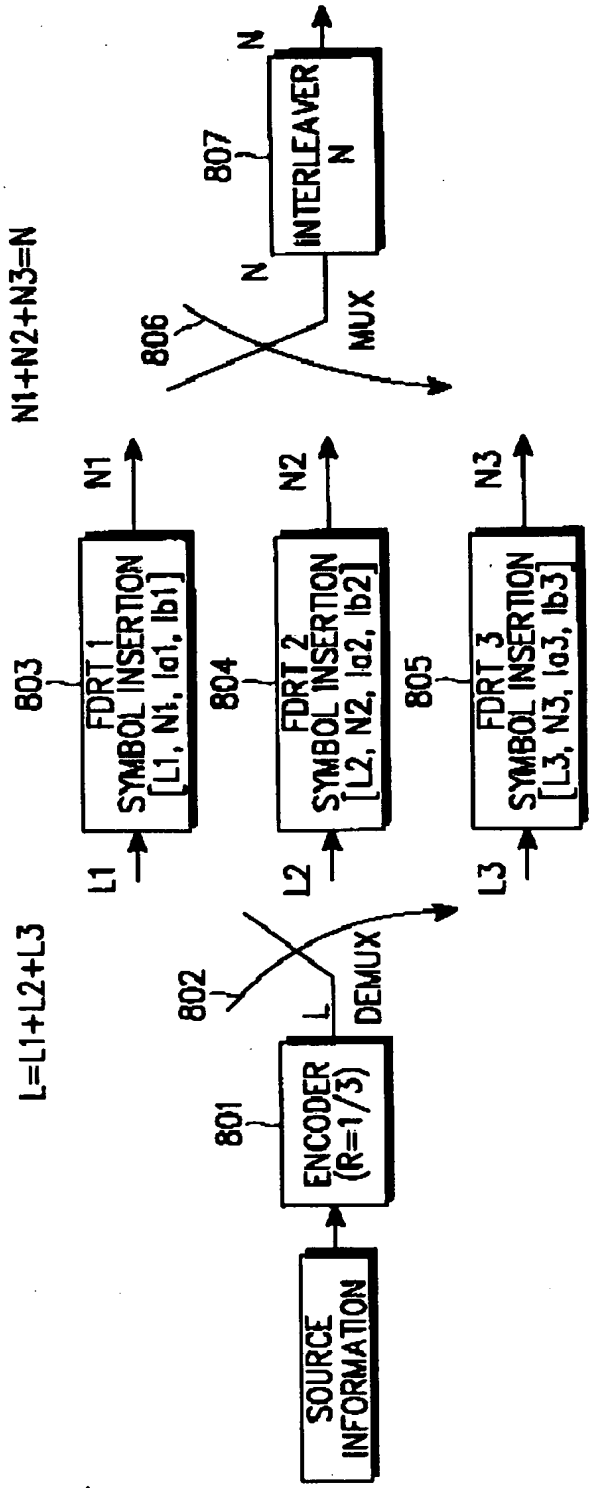

c1,c2,c3,...cL[L CODE SYMBOLS]
SYMBOL REPEATER
707
EN
c1...cL[N OUTPUT SYMBOLS]
Yes: '1'
No: '0'
COMPARATOR
Eacc<=0?
705
706
ADDER
Ia*L
Eacc
703
0
1
Eacc+(Ia*L)
704
EN
INITIAL VALUE: Ib*L
REGISTER
SUBTRACTOR
702
Eacc
701
Ia*Nis

FIG. 8


SOURCE INFORMATION
801
ENCODER (R=1/3)
L
802
DEMUX
L=L1+L2+L3
L1
L2
L3
803
FDRT 1 SYMBOL INSERTION [L1, N1, Ia1, Ib1]
804
FDRT 2 SYMBOL INSERTION [L2, N2, Ia2, Ib2]
805
FDRT 3 SYMBOL INSERTION [L3, N3, Ia3, Ib3]
N1
N2
N3
N1+N2+N3=N
806
MUX
N
807
INTERLEAVER N
N

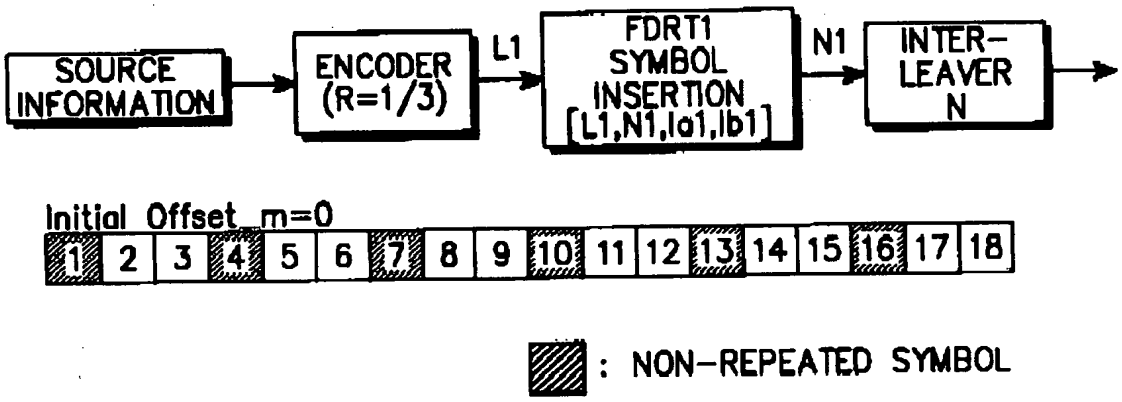

SOURCE INFORMATION
ENCODER (R=1/3)
L1
FDRT1 SYMBOL INSERTION [L1,N1,Ia1,Ib1]
N1
INTER-LEAVER N
Initial Offset_m=0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
: NON-REPEATED SYMBOL

FIG. 9

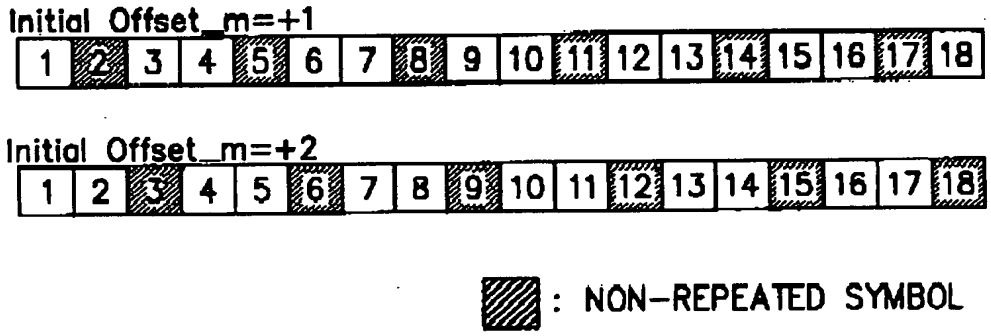

Initial Offset_m=+1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Initial Offset_m=+2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
: NON-REPEATED SYMBOL

FIG. 10

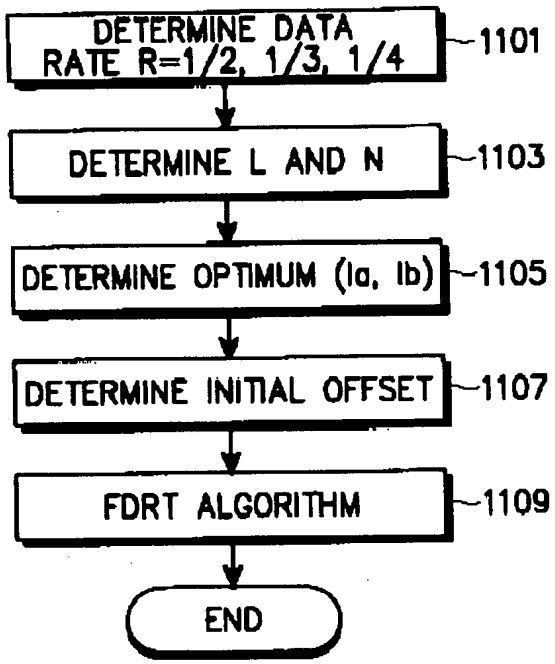

DETERMINE DATA RATE R=1/2, 1/3, 1/4
1101
DETERMINE L AND N
1103
DETERMINE OPTIMUM (Ia, Ib)
1105
DETERMINE INITIAL OFFSET
1107
FDRT ALGORITHM
1109
END

FIG. 11

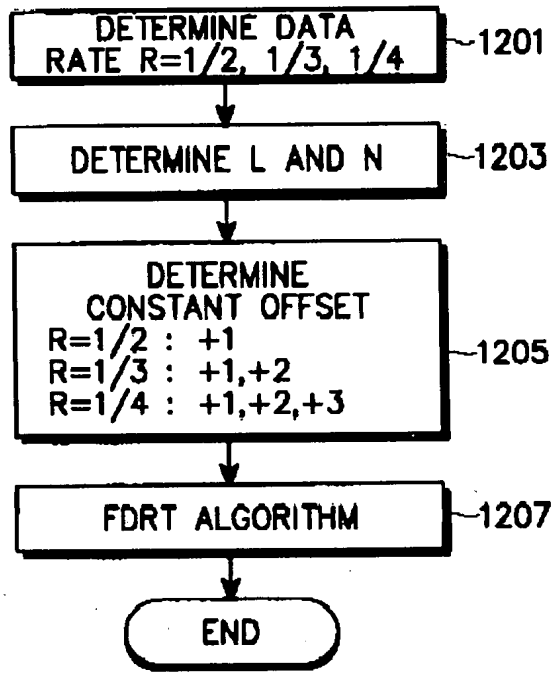

DETERMINE DATA RATE R=1/2, 1/3, 1/4
1201
DETERMINE L AND N
1203
DETERMINE CONSTANT OFFSET
R=1/2 : +1
R=1/3 : +1,+2
R=1/4 : +1,+2,+3
1205
FDRT ALGORITHM
1207
END

FIG. 12